

RAW SEQUENCE LISTING

**The Biotechnology Systems Branch of the Scientific and Technical
Information Center (STIC) no errors detected.**

Application Serial Number: 10/786,425
Source: IFWO
Date Processed by STIC: 07/25/2006

ENTERED



IFWO

RAW SEQUENCE LISTING

DATE: 07/25/2006

PATENT APPLICATION: US/10/786,425

TIME: 12:01:40

Input Set : M:\Crf3\RULE360\10786425.RAW

Output Set: N:\CRF4\07252006\J786425.raw

1 <110> APPLICANT: Stratagene
 2 <120> TITLE OF INVENTION: Renilla Reniformis Green Fluorescent Protein and Mutants
 Thereof
 3 <130> FILE REFERENCE: 25436/1162
 4 <140> CURRENT APPLICATION NUMBER: US/10/786,425
 5 <141> CURRENT FILING DATE: 2004-02-25
 6 <150> PRIOR APPLICATION NUMBER: US/09/795,040
 7 <151> PRIOR FILING DATE: 2001-02-26
 8 <150> PRIOR APPLICATION NUMBER: US 60/185,589
 9 <151> PRIOR FILING DATE: 2000-02-28
 10 <150> PRIOR APPLICATION NUMBER: 60/210,561
 11 <151> PRIOR FILING DATE: 2000-06-09
 12 <160> NUMBER OF SEQ ID NOS: 8
 13 <170> SOFTWARE: PatentIn version 3.0
 15 <210> SEQ ID NO: 1
 16 <211> LENGTH: 720
 17 <212> TYPE: DNA
 18 <213> ORGANISM: Renilla reniformis
 19 <220> FEATURE:
 20 <221> NAME/KEY: exon
 21 <222> LOCATION: (1)..(720)
 22 <223> OTHER INFORMATION: open reading frame
 23 <400> SEQUENCE: 1
 24 atg gtg agt aaa caa ata ttg aag aac act gga ttg cag gag atc atg 48
 25 Met Val Ser Lys Gln Ile Leu Lys Asn Thr Gly Leu Gln Glu Ile Met
 26 1 5 10 15
 27 tcg ttt aaa gtg aat ctg gaa ggt gta gta aac aat cat gtg ttc aca 96
 28 Ser Phe Lys Val Asn Leu Glu Gly Val Val Asn Asn His Val Phe Thr
 29 20 25 30
 30 atg gaa ggt tgt gga aaa gga aat att tta ttc gga aac caa ctg gtt 144
 31 Met Glu Gly Cys Gly Lys Gly Asn Ile Leu Phe Gly Asn Gln Leu Val
 32 35 40 45
 33 cag att cgt gtc aca aaa ggg gtc ccg ctt cca ttt gca ttt gat att 192
 34 Gln Ile Arg Val Thr Lys Gly Val Pro Leu Pro Phe Ala Phe Asp Ile
 35 50 55 60
 36 ctc tca cca gct ttc caa tac ggc aac cgt aca ttc acg aaa tac ccg 240
 37 Leu Ser Pro Ala Phe Gln Tyr Gly Asn Arg Thr Phe Thr Lys Tyr Pro
 38 65 70 75 80
 39 gag gat ata tca gac ttt ttt ata caa tca ttt cca gcg gga ttt gta 288
 40 Glu Asp Ile Ser Asp Phe Phe Ile Gln Ser Phe Pro Ala Gly Phe Val
 41 85 90 95
 42 tac gaa aga acg ttg cgt tac gaa gat ggt gga ctg gtt gaa atc cgt 336
 43 Tyr Glu Arg Thr Leu Arg Tyr Glu Asp Gly Gly Leu Val Glu Ile Arg
 44 100 105 110

RAW SEQUENCE LISTING

DATE: 07/25/2006

PATENT APPLICATION: US/10/786,425

TIME: 12:01:40

Input Set : N:\Crf3\RULE60\10786425.RAW

Output Set: N:\CRF4\07252006\J786425.raw

```

45      tca gat ata aat tta atc gag gag atg ttt gtc tac aga gtg gaa tat      384
46      Ser Asp Ile Asn Leu Ile Glu Glu Met Phe Val Tyr Arg Val Glu Tyr
47              115                      120                      125
48      aaa ggt agt aac ttc ccg aat gat ggt cca gtg atg aag aag aca atc      432
49      Lys Gly Ser Asn Phe Pro Asn Asp Gly Pro Val Met Lys Lys Thr Ile
50              130                      135                      140
51      aca gga tta caa cct tcg ttc gaa gtt gtg tat atg aac gat ggc gtc      480
52      Thr Gly Leu Gln Pro Ser Phe Glu Val Val Tyr Met Asn Asp Gly Val
53      145                      150                      155                      160
54      ttg gtt ggc caa gtc att ctt gtt tat aga tta aac tct ggc aaa ttt      528
55      Leu Val Gly Gln Val Ile Leu Val Tyr Arg Leu Asn Ser Gly Lys Phe
56              165                      170                      175
57      tat tcg tgt cac atg aga aca ctg atg aaa tca aag ggt gta gtg aag      576
58      Tyr Ser Cys His Met Arg Thr Leu Met Lys Ser Lys Gly Val Val Lys
59              180                      185                      190
60      gat ttt ccc gaa tac cat ttc att caa cat cgt tta gag aag act gat      624
61      Asp Phe Pro Glu Tyr His Phe Ile Gln His Arg Leu Glu Lys Thr Asp
62              195                      200                      205
63      gtg gaa gac gga ggt ttt gtt gag caa cac gag acg gcc att gct caa      672
64      Val Glu Asp Gly Gly Phe Val Glu Gln His Glu Thr Ala Ile Ala Gln
65              210                      215                      220
66      ctg aca tcg ctg ggg aaa cca ctt gga tcc tta cac gaa tgg gtt taa      720
67      Leu Thr Ser Leu Gly Lys Pro Leu Gly Ser Leu His Glu Trp Val
68      225                      230                      235
70 <210> SEQ ID NO: 2
71 <211> LENGTH: 239
72 <212> TYPE: PRT
73 <213> ORGANISM: Renilla reniformis
74 <400> SEQUENCE: 2
75      Met Val Ser Lys Gln Ile Leu Lys Asn Thr Gly Leu Gln Glu Ile Met
76      1              5              10              15
77      Ser Phe Lys Val Asn Leu Glu Gly Val Val Asn Asn His Val Phe Thr
78              20              25              30
79      Met Glu Gly Cys Gly Lys Gly Asn Ile Leu Phe Gly Asn Gln Leu Val
80              35              40              45
81      Gln Ile Arg Val Thr Lys Gly Val Pro Leu Pro Phe Ala Phe Asp Ile
82              50              55              60
83      Leu Ser Pro Ala Phe Gln Tyr Gly Asn Arg Thr Phe Thr Lys Tyr Pro
84      65              70              75              80
85      Glu Asp Ile Ser Asp Phe Phe Ile Gln Ser Phe Pro Ala Gly Phe Val
86              85              90              95
87      Tyr Glu Arg Thr Leu Arg Tyr Glu Asp Gly Gly Leu Val Glu Ile Arg
88              100             105             110
89      Ser Asp Ile Asn Leu Ile Glu Glu Met Phe Val Tyr Arg Val Glu Tyr
90              115             120             125
91      Lys Gly Ser Asn Phe Pro Asn Asp Gly Pro Val Met Lys Lys Thr Ile
92              130             135             140
93      Thr Gly Leu Gln Pro Ser Phe Glu Val Val Tyr Met Asn Asp Gly Val
94      145             150             155             160

```

RAW SEQUENCE LISTING

DATE: 07/25/2006

PATENT APPLICATION: US/10/786,425

TIME: 12:01:40

Input Set : N:\Crif3\RULE60\10786425.RAW

Output Set: N:\CRF4\07252006\J786425.raw

```

95      Leu Val Gly Gln Val Ile Leu Val Tyr Arg Leu Asn Ser Gly Lys Phe
96                      165                      170                      175
97      Tyr Ser Cys His Met Arg Thr Leu Met Lys Ser Lys Gly Val Val Lys
98                      180                      185                      190
99      Asp Phe Pro Glu Tyr His Phe Ile Gln His Arg Leu Glu Lys Thr Asp
100                      195                      200                      205
101      Val Glu Asp Gly Gly Phe Val Glu Gln His Glu Thr Ala Ile Ala Gln
102                      210                      215                      220
103      Leu Thr Ser Leu Gly Lys Pro Leu Gly Ser Leu His Glu Trp Val
104                      225                      230                      235
106 <210> SEQ ID NO: 3
107 <211> LENGTH: 720
108 <212> TYPE: DNA
109 <213> ORGANISM: Artificial Sequence
110 <220> FEATURE:
111 <223> OTHER INFORMATION: Humanized DNA
W--> 112 <221> NAME/KEY: exon
113 <222> LOCATION: (1)..(720)
114 <223> OTHER INFORMATION: open reading frame
W--> 115 <400> 3
116      atg gtg agc aag cag atc ctg aag aac acc ggc ctg cag gag atc atg      48
117      Met Val Ser Lys Gln Ile Leu Lys Asn Thr Gly Leu Gln Glu Ile Met
118      1                      5                      10                      15
119      agc ttc aag gtg aac ctg gag ggc gtg gtg aac aac cac gtg ttc acc      96
120      Ser Phe Lys Val Asn Leu Glu Gly Val Val Asn Asn His Val Phe Thr
121                      20                      25                      30
122      atg gag ggc tgc ggc aag ggc aac atc ctg ttc ggc aac cag ctg gtg      144
123      Met Glu Gly Cys Gly Lys Gly Asn Ile Leu Phe Gly Asn Gln Leu Val
124                      35                      40                      45
125      cag atc cgc gtg acc aag ggc gcc ccc ctg ccc ttc gcc ttc gac atc      192
126      Gln Ile Arg Val Thr Lys Gly Ala Pro Leu Pro Phe Ala Phe Asp Ile
127                      50                      55                      60
128      ctg agc ccc gcc ttc cag tac ggc aac cgc acc ttc acc aag tac ccc      240
129      Leu Ser Pro Ala Phe Gln Tyr Gly Asn Arg Thr Phe Thr Lys Tyr Pro
130      65                      70                      75                      80
131      gag gac atc agc gac ttc ttc atc cag agc ttc ccc gcc ggc ttc gtg      288
132      Glu Asp Ile Ser Asp Phe Phe Ile Gln Ser Phe Pro Ala Gly Phe Val
133                      85                      90                      95
134      tac gag cgc acc ctg cgc tac gag gac ggc ggc ctg gtg gag atc cgc      336
135      Tyr Glu Arg Thr Leu Arg Tyr Glu Asp Gly Gly Leu Val Glu Ile Arg
136                      100                     105                     110
137      agc gac atc aac ctg atc gag gag atg ttc gtg tac cgc gtg gag tac      384
138      Ser Asp Ile Asn Leu Ile Glu Glu Met Phe Val Tyr Arg Val Glu Tyr
139                      115                     120                     125
140      aag ggc cgc aac ttc ccc aac gac ggc ccc gtg atg aag acc atc      432
141      Lys Gly Arg Asn Phe Pro Asn Asp Gly Pro Val Met Lys Lys Thr Ile
142                      130                     135                     140
143      acc ggc ctg cag ccc agc ttc gag gtg gtg tac atg aac gac ggc gtg      480
144      Thr Gly Leu Gln Pro Ser Phe Glu Val Val Tyr Met Asn Asp Gly Val

```

RAW SEQUENCE LISTING

DATE: 07/25/2006

PATENT APPLICATION: US/10/786,425

TIME: 12:01:40

Input Set : N:\Crif3\RULE60\10786425.RAW

Output Set: N:\CRF4\07252006\J786425.raw

```

145      145      150      155      160
146      ctg gtg ggc cag gtg atc ctg gtg tac cgc ctg aac agc ggc aag ttc      528
147      Leu Val Gly Gln Val Ile Leu Val Tyr Arg Leu Asn Ser Gly Lys Phe
148      165      170      175
149      tac agc tgc cac atg cgc acc ctg atg aag agc aag ggc gtg gtg aag      576
150      Tyr Ser Cys His Met Arg Thr Leu Met Lys Ser Lys Gly Val Val Lys
151      180      185      190
152      gac ttc ccc gag tac cac ttc atc cag cac cgc ctg gag aag acc tac      624
153      Asp Phe Pro Glu Tyr His Phe Ile Gln His Arg Leu Glu Lys Thr Tyr
154      195      200      205
155      gtg gag gac ggc ggc ttc gtg gag cag cac gag acc gcc atc gcc cag      672
156      Val Glu Asp Gly Gly Phe Val Glu Gln His Glu Thr Ala Ile Ala Gln
157      210      215      220
158      ctg acc agc ctg ggc aag ccc ctg ggc agc ctg cac gag tgg gtg taa      720
159      Leu Thr Ser Leu Gly Lys Pro Leu Gly Ser Leu His Glu Trp Val
160      225      230      235
162 <210> SEQ ID NO: 4
163 <211> LENGTH: 239
164 <212> TYPE: PRT
165 <213> ORGANISM: Artificial Sequence
166 <220> FEATURE:
167 <223> OTHER INFORMATION: Polypeptide coded by humanized DNA
168 <400> SEQUENCE: 4
169      Met Val Ser Lys Gln Ile Leu Lys Asn Thr Gly Leu Gln Glu Ile Met
170      1      5      10      15
171      Ser Phe Lys Val Asn Leu Glu Gly Val Val Asn Asn His Val Phe Thr
172      20      25      30
173      Met Glu Gly Cys Gly Lys Gly Asn Ile Leu Phe Gly Asn Gln Leu Val
174      35      40      45
175      Gln Ile Arg Val Thr Lys Gly Ala Pro Leu Pro Phe Ala Phe Asp Ile
176      50      55      60
177      Leu Ser Pro Ala Phe Gln Tyr Gly Asn Arg Thr Phe Thr Lys Tyr Pro
178      65      70      75      80
179      Glu Asp Ile Ser Asp Phe Phe Ile Gln Ser Phe Pro Ala Gly Phe Val
180      85      90      95
181      Tyr Glu Arg Thr Leu Arg Tyr Glu Asp Gly Gly Leu Val Glu Ile Arg
182      100      105      110
183      Ser Asp Ile Asn Leu Ile Glu Glu Met Phe Val Tyr Arg Val Glu Tyr
184      115      120      125
185      Lys Gly Arg Asn Phe Pro Asn Asp Gly Pro Val Met Lys Lys Thr Ile
186      130      135      140
187      Thr Gly Leu Gln Pro Ser Phe Glu Val Val Tyr Met Asn Asp Gly Val
188      145      150      155      160
189      Leu Val Gly Gln Val Ile Leu Val Tyr Arg Leu Asn Ser Gly Lys Phe
190      165      170      175
191      Tyr Ser Cys His Met Arg Thr Leu Met Lys Ser Lys Gly Val Val Lys
192      180      185      190
193      Asp Phe Pro Glu Tyr His Phe Ile Gln His Arg Leu Glu Lys Thr Tyr
194      195      200      205

```

RAW SEQUENCE LISTING

DATE: 07/25/2006

PATENT APPLICATION: US/10/786,425

TIME: 12:01:40

Input Set : N:\Crf3\RULE60\10786425.RAW

Output Set: N:\CRF4\07252006\J786425.raw

```

195      Val Glu Asp Gly Gly Phe Val Glu Gln His Glu Thr Ala Ile Ala Gln
196          210                      215                      220
197      Leu Thr Ser Leu Gly Lys Pro Leu Gly Ser Leu His Glu Trp Val
198          225                      230                      235
200 <210> SEQ ID NO: 5
201 <211> LENGTH: 44
202 <212> TYPE: DNA
203 <213> ORGANISM: Artificial Sequence
204 <220> FEATURE:
205 <223> OTHER INFORMATION: Synthetic primer
W--> 206 <221> NAME/KEY: misc_feature
207 <222> LOCATION: (1)..(44)
208 <223> OTHER INFORMATION: Synthetic primer
W--> 209 <400> 5
210      aattattaga attcaccatg gtgagtaaac aaatattgaa gaac
212 <210> SEQ ID NO: 6
213 <211> LENGTH: 38
214 <212> TYPE: DNA
215 <213> ORGANISM: Artificial Sequence
216 <220> FEATURE:
217 <223> OTHER INFORMATION: Synthetic primer
W--> 218 <221> NAME/KEY: misc_feature
219 <222> LOCATION: (1)..(38)
220 <223> OTHER INFORMATION: Synthetic primer
W--> 221 <400> 6
222      ataattattct cgagttaaac ccattcgtgt aaggatcc
224 <210> SEQ ID NO: 7
225 <211> LENGTH: 7
226 <212> TYPE: DNA
227 <213> ORGANISM: Artificial Sequence
228 <220> FEATURE:
229 <223> OTHER INFORMATION: Consensus sequence
W--> 230 <221> NAME/KEY: misc_feature
231 <222> LOCATION: (1)..(7)
232 <223> OTHER INFORMATION: Consensus sequence
W--> 233 <400> 7
234      accatgg
236 <210> SEQ ID NO: 8
237 <211> LENGTH: 6
238 <212> TYPE: PRT
239 <213> ORGANISM: Renilla reniformis
240 <220> FEATURE:
241 <221> NAME/KEY: DOMAIN
242 <222> LOCATION: (1)..(6)
243 <223> OTHER INFORMATION: Chromophoric center
244 <400> SEQUENCE: 8
245      Phe Gln Tyr Gly Asn Arg
246      1                      5

```

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 07/25/2006
PATENT APPLICATION: US/10/786,425 TIME: 12:01:41

Input Set : N:\Crf3\RULE60\10786425.RAW
Output Set: N:\CRF4\07252006\J786425.raw

Invalid Line Length:

The rules require that a line not exceed 72 characters in length. This includes spaces.

Seq#:1; Line(s) 2

VERIFICATION SUMMARY

DATE: 07/25/2006

PATENT APPLICATION: US/10/786,425

TIME: 12:01:41

Input Set : N:\CrF3\RULE60\10786425.RAW

Output Set: N:\CRF4\07252006\J786425.raw

L:112 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:115 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:3
L:206 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:209 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:5
L:218 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:221 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:6
L:230 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:233 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:7